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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,826	09/24/1999	MICHAEL J. HAWTHORNE	509/35644	8826

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EXAMINER

KISS, ERIC B

ART UNIT

PAPER NUMBER

2122

DATE MAILED: 12/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/404,826

Applicant(s)

HAWTHORNE ET AL.

Examiner

Eric B. Kiss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 10, 12-23, 25, 26, 28, 29 and 46-49 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 15-23, 25, 26, 28, 29 and 46-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment of November 13, 2002 has been received and entered. Claims 1-7, 9, 10, 12-23, 25, 26, 28, 29, and 46-49 are pending.

Claims 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim (see Response to Arguments and the 35 USC § 102 rejection of claim 1 below).

Response to Amendment

2. Applicant's amendments to the specification and claim 26 appropriately address the objections based on informalities in the specification and claim 26 as detailed in the previous office action. Accordingly, these objections are withdrawn in view of Applicant's amendment.

3. Applicant's amendment to claim 10 appropriately addresses the 35 U.S.C. 112, second paragraph rejection based on indefiniteness as detailed in the previous office action.

Accordingly, this rejection is withdrawn in view of Applicant's amendment.

Response to Arguments

4. Applicant's arguments filed on November 13, 2002, have been fully considered but they are not persuasive.

5. On page 2, paragraph 3, Applicant argues:

As a first point of distinction, there is no description the intelligent devices [of Neeson et al.] can be event recorders, train performance data or track data in files. Even if the intelligent devices are interpreted to include such types of devices, the information in these files are not being collected from the intelligent devices for transmission, but only whether the event recorder train data monitoring devices and track monitoring devices are present or not present or active.

However, the method of Neeson et al. builds on, and incorporates the elements of, the AMCI Base Networking System (ABNS), which includes collecting and transmitting event recorder data, train performance data, and track data (train control, location, and speed monitoring, track warrants and bulletins and work order reporting; see column 1, line 51 through column 2, line 4). Neeson et al. further describes the ABNS as including the intelligent devices and providing communications between the intelligent devices and a central computer location via mobile communications packages to transmit the information, such as work order reporting and location monitoring (see column 2, lines 5-27). The invention of Neeson et al. is described as being designed to “piggy back” on the already existing ABNS and ATCS (Advanced Train Control System) systems (see column 22, lines 55-59).

6. On page 2, paragraph 4, Applicant argues:

As a second point of distinction, there is no determination of a remote station within range. The description in Neeson et al. is that the remote stations are in control of the communications with the locomotive. As indicated in column 7, the paragraph beginning on line 29, the base stations 52 and 54 maintain contact with the locomotive and the communication is “passed off” to the next station along the path. This infers that there is continuous communication versus intermittent communication, as described in the present process. The files are not transferred, and telecommunication is established. There does not appear to be a

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disclosure in Neeson et al. that the transmission would be interrupted, stopped or not made if there was not communication with the base station 52 or 54.

However, "passing off" communication to the next station along the path (as disclosed by Neeson et al.) is a function of determining if a remote station is in range. Neeson et al. discloses the field unit (locomotive) remaining in radio contact range of the nearest base station as it moves along the track. "Passing off" infers that as a new base station comes within range, radio communication is handled by the new base station that is determined to be within range. Therefore, the Examiner maintains that Neeson et al. discloses determining if a remote station is within range.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., intermittent communication) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. On page 3, paragraph 2, Applicant argues:

Although Neeson et al. does communicate information between the on-board locomotive base stations 52 and 54 and front end processor 46, it only transfers the information, the alert and "Health Reports" from the locomotive through the base stations 52 and 54, and information from the front end processor 46 to the locomotive through the base stations 52 and 54. Furthermore, although information is simply stored in base stations 52 and 54, there is no transfer of information of updates to be installed on the remote station nor is there transfer of information to the home base of operational information about the remote station. The remote station is just a conduit or temporary way station which allows communication between the on-board computer and a home base station.

However, the Examiner maintains that Neeson et al. does disclose the transfer of information to the home base of operational information about the remote station (for example, the database at the home base station (front end processor) maintains a database containing the base station which last heard the mobile with a particular piece of equipment active, along with the signal strength indicator (SSI) from that base station; see column 12, lines 50-67).

Furthermore, although Neeson et al. does not expressly disclose transfer of information of updates to be installed on the remote station, the recitation of claim 22 calls for one or more of updates to be installed on the remote station and updates to be transferred to and installed on a computer onboard a locomotive (see lines 7-9). In a prior office action, the disclosure of Neeson et al. indicating updates to be transferred to and installed on a computer onboard a locomotive has been cited (see Neeson et al., column 19, lines 49-67, which describes sending a configuration change message from the front end processor to the locomotive onboard computer).

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-3, 5-7, 9, 10, 15-19, 22, 23, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,786,998 to Neeson et al.

As per claim 1, Neeson discloses collecting event recorder data, train performance data and track data in files on the on-board computer (see column 1, line 51 through column 2, line 4; and column 8, lines 11-24); determining if a remote station is within range (see column 7, line 63 through column 8, line 3); establishing wireless communication between an on-board computer (field unit) and a remote station (base station; see column 7, lines 29-47); and determining which of the files are new since last transmission, and transferring the new files to the remote station (see column 5, lines 1-15).

As per claims 2 and 3, Neeson discloses determining whether a remote station has updates to be transferred and transferring the updates, including software updates (configuration changes) to the on-board computer (see column 19, lines 49-67).

As per claim 5, Neeson further discloses determining the location of the train and the location of the next remote station (receiving base station; see column 7, line 63 through column 8, line 3).

As per claim 6, Neeson further discloses transmitting a wireless query and monitoring for a response (loss of mobile contact/acquired mobiles; see column 21, lines 42-48).

As per claim 7, Neeson further discloses resuming file transfers during subsequent communication sessions after an interruption of wireless communication (see column 14, line 10 through column 15, line 34).

As per claim 9, Neeson further discloses files including data from plural event recorders (intelligent devices) that transfer data to the on-board computer (processing device; see column 4, lines 44-57).

As per claim 10, Neeson further discloses the plural event recorders each connected to a respective on-board computer (intelligent devices have computer processing – “receive and understand” capabilities; see column 2, lines 5-27), establishing wireless communication between the on-board computers (intelligent devices) and the remote station (intelligent devices communicate to the base stations via the processing device), and transferring event recorder data from each of the on-board computers to the remote station (see column 4, line 33 through column 5, line 15).

As per claim 15, Neeson further discloses establishing communication between a remote station (base station) and a home base station (front end processor), and determining what files need to be transferred and transferring the files (see column 8, lines 11-18 and lines 40-44).

As per claim 16, Neeson further discloses transferring operational data for the onboard computer (traffic control information; see column 8, lines 18-24) from the home base station (front end processor) to the remote station (base station).

As per claims 17 and 18, Neeson further discloses transferring operation information of the remote station, including locomotives contacted (locomotive ID) from the remote station (base station) to the home base station (front end processor; see column 12, lines 50-67).

As per claim 19, Neeson further discloses establishing communication between the remote station (base station) and the home base station (front end processor) when requested by a user or according to a schedule (see column 10, lines 19-24).

As per claim 22, Neeson discloses responding to various trigger events to determine that a transfer is needed (see column 10, lines 16-24), establishing communication between a remote station (base station) and a home base station (front end processor), and determining what files

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need to be transferred and transferring the files (see column 8, lines 11-18 and lines 40-44), wherein the files transferred to the remote station include updates to be transferred to and installed on a computer onboard a locomotive has been cited (see Neeson et al., column 19, lines 49-67, which describes sending a configuration change message from the front end processor to the locomotive onboard computer); and wherein the files transferred to the home base station include operational information about the remote station (for example, the database at the home base station (front end processor) maintains a database containing the base station which last heard the mobile with a particular piece of equipment active, along with the signal strength indicator (SSI) from that base station; see column 12, lines 50-67).

As per claim 23, Neeson further discloses transferring a callbook (cluster controller data) to the remote station that defines with which remote stations an on-board computer will initiate communication (see column 7, lines 48-63).

As per claim 28, Neeson further discloses the operational information of the remote station, including locomotives contacted (locomotive ID) and communication statistics (the signal strength indicator (SSI) from that base station; see column 12, lines 50-67) from the remote station (base station) to the home base station (front end processor; see column 12, lines 50-67).

As per claim 29, Neeson further discloses the home base station (front end processor) using the onboard computer files for report generation (see column 8, lines 24-44) and archival (see column 12, lines 54-57).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 4, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claims 1 and 22 above, and further in view of U.S. Patent No. 5,848,064 to Cowan.

As per claim 4, Neeson teaches transferring updates to the on-board computer (see column 19, lines 49-67) but fails to teach comparing the version of a file in the on-board computer to the version of a file in the remote station to affect what is transferred. However, Cowan teaches changing the operating software of mobile terminals by detecting a change in a software version identifier in a remote station (host computer) and transferring the change (new version) resulting from the comparison (see column 6, lines 41-51). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the software updating method of Neeson to include the version comparison of Cowan. One would be motivated to do so to ensure that on-board computer's software is kept up-to-date.

As per claims 25 and 26, Neeson teaches transferring updates to the on-board computer (see column 19, lines 49-67) but fails to teach comparing the version of a file in the remote station to the version of a file in the home base station, where a new software version triggers the transfer of the software update. However, Cowan teaches triggering a change in the operating software of mobile terminals by detecting a change in a software version identifier in a remote

station (host computer) corresponding to a change in version information (Package Definition table) in a home base station (WAN host) and transferring the change (new version) resulting from the comparison the next time the mobile system boots up or attempts to download an update (see column 6, lines 41-51 and column 15, line 53 through column 16, line 14).

Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the software updating method of Neeson to include the base station (WAN host) version comparison and triggering of Cowan. One would be motivated to do so to perform automatic global software upgrades.

12. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,420,883 to Swensen et al.

As per claims 20 and 21, Neeson teaches transferring files between an on-board computer and a remote station (base station; see column 8, lines 11-24) but fails to teach transferring files between remote stations. However, Swensen teaches a hierarchical scheme in which remote stations (trackside radios) retransmit received messages to other, different level, remote stations within a subnet (see column 5, line 64 through column 6, line 29 and Figure 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to include the retransmitting scheme of Swensen. One would be motivated to do so to allow for contacting a train or remote station where a direct link is not possible.

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13. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neeson as applied to claim 1 above, and further in view of U.S. Patent No. 5,785,283 to Ehrenberger et al.

As per claims 46 and 47, Neeson teaches transferring data from a remote station to an on-board computer and from an on-board computer to a remote station (base station; see column 8, lines 11-24) but fails to teach transferring track data or displaying track data on the train. However, Ehrenberger teaches transferring track data (wayside defects) from a remote station (wayside system) to an on-board computer (see Figure 1) and displaying the track data on the train (see column 3, lines 9 through 21). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Neeson method to include transferring track data to the on-board computer and displaying the track data as taught by Ehrenberger and subsequently transferring the track data to another remote station. One would be motivated to do so to keep the train operator informed of potential hazards in the area and to disseminate the information to other train operators in the system.

As per claim 48, in addition to the teachings applied above, Ehrenberger further suggests other types of track data, including status of a highway crossing analyzer (see column 6, lines 52-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the Neeson method to include track information such as crossing gate position or crossing occupancy status as per the suggestion of Ehrenberger. One would be motivated to do so to communicate a potential highway crossing hazard to the locomotive operator in advance of the train approaching the highway crossing.

As per claim 49, in addition to the teachings applied above, it would have been furthermore obvious to include correlating train performance data with track data, e.g. making a change in speed in response to a detected potential hazard.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (703) 305-7737. The examiner can normally be reached on Tue. - Fri., 7:30 am - 5:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703) 308-4789.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703) 746-7239 (for formal communications intended for entry)

Or:

(703) 746-7240 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA, 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-3900.

EBK / *EBK*
December 12, 2002


ANIL KHATRI
PRIMARY EXAMINER